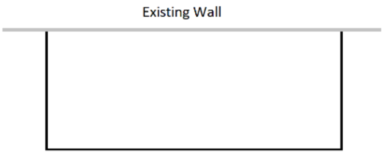
www.m4ths.com - A Level Maths
3 Exam Questions
Yr 1 - Differentiation

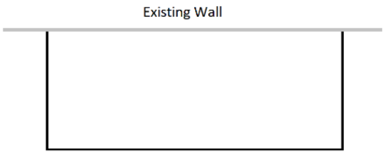
(1) $\mathrm{f}(x) = \frac{2}{\sqrt{x}} - x, \quad x > 0$
The normal to $\mathrm{f}(x)$ at the point (p, q) is parallel to the line with equation $2x - 18y = 3$. Find the exact values of p and q.
(2) John has 72m of wire and needs to make a rectangular pig pen with 3 sides below. *(The existing wall doesn't need to be wired).*



Use calculus to find the maximum possible area the pig pen can be and prove that it's a maximum value.
(3) Show that the curve with equation $y = 1 - 0.5x + 2x^5$ has no points of inflexion.

www.m4ths.com - A Level Maths
3 Exam Questions
Yr 1 - Differentiation

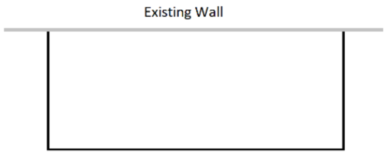
(1) $\mathrm{f}(x) = \frac{2}{\sqrt{x}} - x, \quad x > 0$
The normal to $\mathrm{f}(x)$ at the point (p, q) is parallel to the line with equation $2x - 18y = 3$. Find the exact values of p and q.
(2) John has 72m of wire and needs to make a rectangular pig pen with 3 sides below. *(The existing wall doesn't need to be wired).*



Use calculus to find the maximum possible area the pig pen can be and prove that it's a maximum value.
(3) Show that the curve with equation $y = 1 - 0.5x + 2x^5$ has no points of inflexion.

www.m4ths.com - A Level Maths
3 Exam Questions
Yr 1 - Differentiation

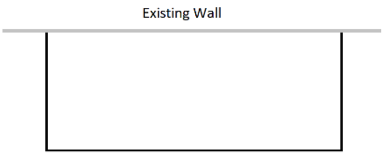
(1) $\mathrm{f}(x) = \frac{2}{\sqrt{x}} - x, \quad x > 0$
The normal to $\mathrm{f}(x)$ at the point (p, q) is parallel to the line with equation $2x - 18y = 3$. Find the exact values of p and q.
(2) John has 72m of wire and needs to make a rectangular pig pen with 3 sides below. *(The existing wall doesn't need to be wired).*



Use calculus to find the maximum possible area the pig pen can be and prove that it's a maximum value.
(3) Show that the curve with equation $y = 1 - 0.5x + 2x^5$ has no points of inflexion.

www.m4ths.com - A Level Maths
3 Exam Questions
Yr 1 - Differentiation

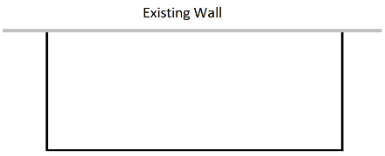
(1) $\mathrm{f}(x) = \frac{2}{\sqrt{x}} - x, \quad x > 0$
The normal to $\mathrm{f}(x)$ at the point (p, q) is parallel to the line with equation $2x - 18y = 3$. Find the exact values of p and q.
(2) John has 72m of wire and needs to make a rectangular pig pen with 3 sides below. *(The existing wall doesn't need to be wired).*



Use calculus to find the maximum possible area the pig pen can be and prove that it's a maximum value.
(3) Show that the curve with equation $y = 1 - 0.5x + 2x^5$ has no points of inflexion.

www.m4ths.com - A Level Maths
3 Exam Questions
Yr 1 - Differentiation

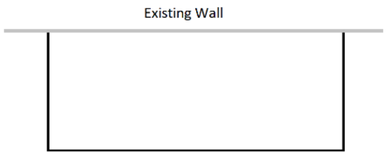
(1) $\mathrm{f}(x) = \frac{2}{\sqrt{x}} - x, \quad x > 0$
The normal to $\mathrm{f}(x)$ at the point (p, q) is parallel to the line with equation $2x - 18y = 3$. Find the exact values of p and q.
(2) John has 72m of wire and needs to make a rectangular pig pen with 3 sides below. *(The existing wall doesn't need to be wired).*



Use calculus to find the maximum possible area the pig pen can be and prove that it's a maximum value.
(3) Show that the curve with equation $y = 1 - 0.5x + 2x^5$ has no points of inflexion.

www.m4ths.com - A Level Maths
3 Exam Questions
Yr 1 - Differentiation

(1) $\mathrm{f}(x) = \frac{2}{\sqrt{x}} - x, \quad x > 0$
The normal to $\mathrm{f}(x)$ at the point (p, q) is parallel to the line with equation $2x - 18y = 3$. Find the exact values of p and q.
(2) John has 72m of wire and needs to make a rectangular pig pen with 3 sides below. *(The existing wall doesn't need to be wired).*



Use calculus to find the maximum possible area the pig pen can be and prove that it's a maximum value.
(3) Show that the curve with equation $y = 1 - 0.5x + 2x^5$ has no points of inflexion.